

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. **(currently amended):** An isolated lactic acid bacterial strain belonging to the genus *Lactococcus* and isolated from human stool, wherein the bacterial strain is *Lactococcus garvieae* 20-92 deposited under FERM BP-10036 and the bacterial strain has an ability to utilize at least one daidzein compound selected from the group consisting of daidzein glycosides, daidzein, and dihydrodaidzein to produce equol.

2. **(canceled).**

3. **(canceled).**

4. **(previously presented):** A composition comprising the isolated lactic acid bacterial strain belonging to the genus *Lactococcus* according to Claim 1 and at least one member selected from the group consisting of daidzein compounds and daidzein compound-containing ingredients.

5. **(original):** The composition according to Claim 4, wherein the daidzein compound-containing ingredient is soybean flour or soy milk.

6. **(original):** The composition according to Claim 4 which is in the form of a beverage or a milk product.

7. **(original):** The composition according to Claim 4 further comprising equol.

8. **(original):** The composition according to Claim 7 which is in the form of a fermentation product of soy milk.

9. **(withdrawn-currently amended):** A method of producing equol comprising the step of letting an isolated lactic acid bacterial strain belonging to the genus *Lactococcus* and isolated from human stool, wherein the bacterial strain is *Lactococcus garvieae* 20-92 deposited under FERM BP-10036 and the bacterial strain has an ability to utilize a daidzein compound to produce equol, act on at least one member selected from the group consisting of daidzein compounds and daidzein compound-containing ingredients.

10. **(canceled).**

11. **(canceled).**

12. **(withdrawn):** The method according to Claim 9, wherein the daidzein compound-containing ingredient is soybean flour or soy milk.

13. **(canceled).**

**14. (previously presented):** A composition comprising the isolated lactic acid bacterial strain belonging to *Lactococcus garvieae* according to Claim 1 and an edible or pharmaceutically acceptable carrier.

**15. (currently amended):** The isolated lactic acid bacterial strain belonging to the genus *Lactococcus* according to Claim 1, which has the following characteristics (1) to (15):

- (1) Optimum temperature for growth: 37°C
- (2) Optimum pH for growth: 7.0
- (3) Liquefaction of gelatin: -
- (4) Production of acetoin from pyruvic acid: +
- (5) Hydrolysis of hippuric acid: -
- (6) Hydrolysis of esculin: +
- (7) Pyrrolidonyl arylamidase: +
- (8)  $\alpha$ -Galactosidase: -
- (9)  $\beta$ -Galactosidase: -
- (10)  $\beta$ -Glucuronidase: -
- (11) Alkaline phosphatase: -
- (12) Leucine arylamidase: +
- (13) Arginine dihydrazase: +
- (14) Assimilation of carbon sources

D-Ribose +

L-Arabinose -

D-Mannitol +  
D-Sorbitol -  
Lactose -  
D-Trehalose +  
Inulin -  
D-Raffinose -  
Starch +  
Glycogen -

(15) Organic acid composition after utilization of peptone or glucose is as shown in the following table:

<u>Organic acid</u>	<u>Peptone</u>	<u>Glucose</u>
<u>Maleic acid</u>	<u>nd</u>	<u>nd</u>
<u>Succinic acid</u>	<u>0.00</u>	<u>0.01</u>
<u>Lactic acid</u>	<u>3.33</u>	<u>27.35</u>
<u>Formic acid</u>	<u>1.13</u>	<u>0.88</u>
<u>Acetic acid</u>	<u>3.32</u>	<u>0.57</u>
<u>Pyroglutamic acid</u>	<u>0.12</u>	<u>0.25</u>
<u>Propionic acid</u>	<u>nd</u>	<u>nd</u>
<u>i-Butyric acid</u>	<u>nd</u>	<u>nd</u>
<u>n-Butyric acid</u>	<u>nd</u>	<u>nd</u>
<u>i-Valeric acid</u>	<u>nd</u>	<u>nd</u>
<u>n-Valeric acid</u>	<u>nd</u>	<u>nd</u>

nd = not detected.